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AUTHOR Eddowes, Edward E.; King, Norman W.
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ABSTRACT

The report describes how students eliminated from undergraduate pilot training (UPT) perceived the circumstances leading to their elimination. Personal interviews were held with 117 students eliminated from UPT. The data obtained were organized on the basis of the official cause of elimination. The frequencies of problems or factors perceived as contributing to elimination were categorized according to the five most prevalent causes of UPT attrition: self-initiated elimination, manifestation of apprehension, flying deficiency, medical deficiency, and academic deficiency. Information from the study is presented in a series of 10 tables following the interview format. Similarities and differences in student perception of problems as a function of cause of elimination are noted and briefly discussed. The contents of the tables provide suggestions which may be evaluated on their merits in considering prospective modification of training procedures. It was concluded that eliminated students' perceptions of training problem areas can provide useful information for training program management and can suggest areas for training research. The elimination interview format is appended. (Author/EC)

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AFHRL-TR-75-8

AIR FORCE HUMAN RESOURCES LABORATORY

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SELF-PERCEIVED PROBLEMS OF STUDENT PILOTS ELIMINATED FROM UNDERGRADUATE PILOT TRAINING

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By
Edward E. Eddowes
Norman W. King

FLYING TRAINING DIVISION
Williams Air Force Base, Arizona 85224

July 1975
Interim Report for Period April 1973 – April 1974

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This report describes how students eliminated from undergraduate pilot training (UPT) perceived the circumstances leading to their elimination. The objectives of the study were: increased understanding of factors associated with UPT attrition and delineation of prime areas for training research. Personal interviews with 117 eliminees provided information on the similiarities and differences among five categories of attrition (self-initiated elimination (SIE), manifestation of apprehension (MOA), flying deficiency (FD), medical deficiency (MD) and academic deficiency (ACAD). While major problem areas were identified related to learning how to land the aircraft and with student-instructor pilot interactions, inability to acquire pilot skills is not as important a basis for elimination from UPT as are other categories of elimination, such as SIE and MOA, both of which are associated

Item 20 (Continued)

with a variety of psychological attributes. It was concluded that eliminees' perceptions of training problem areas can provide useful information for training program management and can suggest areas for training research.

PREFACE

This report describes the perceptions of students eliminated from the undergraduate pilot training (UPT) program at Williams Air Force Base, Arizona. It presents various factors they believe to have contributed to their elimination from UPT. It documents the initial part of a study being conducted by the Flying Training Division of the Air Force Human Resources Laboratory at Williams Air Force Base, Arizona, under Project 1123, United States Air Force Flying Training Development, Dr. William V. Hagin, project scientist, and Task 112305, Dr. Norman W. King, task scientist. The principal investigators for the period covered by this report were Dr. Edward E. Eddowes and Dr. Norman W. King.

The authors acknowledge the significant contributions of the previous researchers on this task whose work in refining the interview format led to the procedures used to gather the information on which the present report is based. Appreciation is also expressed to Amn Michael J. Fiero, Jr., who assisted in the organization and analysis of the data.

SUMMARY

Problem

Attrition of undergraduate pilot training (UPT) students is a concern to the Air Training Command (ATC) because of increasing training costs and the potential limitations on available candidates for pilot training under an all-volunteer force program. While considerable data exist on causes, commission sources, and training phases of student attrition (information suitable for production management), little information exists which provides an understanding of attrition from the student's point of view which can be used for modifications of the training program. This study was designed to derive a better understanding of factors associated with attrition and to delineate areas of UPT which could benefit from training research. This report introduces a format for interviewing eliminees and analyzes UPT attrition from the eliminees' perceptions of their problems.

Approach

Personal interviews were held with students eliminated from UPT. The data obtained in the interviews were organized on the basis of the official cause of elimination. The frequencies of problems or factors perceived as contributing to elimination were categorized according to the five most prevalent causes of UPT attrition: self-initiated elimination (SIE), manifestation of apprehension (MOA), flying deficiency (FD), medical deficiency (MD), and academic deficiency (ACAD).

Results

Information from the study is presented in a series of tables following the interview format. Similarities and differences in student perceptions of problems as a function of cause of elimination are noted and discussed briefly. The contents of the tables provide suggestions which may be evaluated on their merits in considering prospective modifications of training procedures.

Conclusions

Relative to the objective of improving understanding of factors related to UPT attrition, the results indicate that: (1) psychological factors are found more frequently in UPT student attrition than the inability to acquire pilot skills, (2) instructor pilot (IP)-student interaction is an important factor in student attrition, and (3) specific characteristics of UPT can be identified as sources of student irritation.

Relative to the objective of defining areas which could profit from training research: (1) The student-IP interactions were identified as an area which could benefit from research, and (2) the interview method, while effective as a research data gathering technique, is expensive and a more economical operational method should be sought.

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SELF-PERCEIVED PROBLEMS OF STUDENT PILOTS ELIMINATED FROM UNDERGRADUATE PILOT TRAINING

I. INTRODUCTION

The attrition of students during undergraduate pilot training (UPT) is a continuing problem in Air Force flying training. It has been estimated that 27 percent of the candidates selected for UPT will fail to complete the training program (Mission Analysis, 1972). The current attrition rate is 23.3 percent (ATC Management Summary, 1974). The concern lies in part in the cost of attrition. In 1971, the average expenditure on each student who was eliminated from UPT was estimated at $16,000 (Mission Analysis, 1972). This was at a time when Air Training Command (ATC) estimated its cost per graduate at $75,000. The present cost per graduate is estimated to be $167,000 (ATC Management Summary, 1974). If the cost of attrition has increased proportionally with the cost of training, then attrition now costs ATC $35,000 for each eliminated student.

In addition to the cost of attrition, there is also concern about the availability of candidates for pilot training; particularly in this era of the all volunteer Air Force. Any severe limitation of candidate availability may make the loss of one student in four an untenable elimination ratio.

In documenting attrition in UPT, the Air Force uses a systematic approach which considers attrition in terms of: (1) the cause of elimination, (2) the source of commission, and (3) the phase of training during which elimination occurred. These broad categories provide perspectives to aid in management of the UPT program.

An alternative approach to understanding attrition considered in this study is to identify aspects of the UPT program most often associated with attrition, particularly, attrition related to training or motivational problems. Implementation of such an approach will generate information which can be used to define modifications of the training program to increase training production without concomitant reduction of training quality or prohibitive increases in training costs. The objective of this study is to derive a better understanding of factors associated with UPT attrition and to delineate those areas of the UPT program which could benefit from training research.

The specific purpose of this report is threefold: (1) to analyze UPT attrition in terms of the students' perceptions of the factors involved in their elimination, (2) to present the method used for gathering data from students eliminated from UPT at Williams AFB, Arizona, and (3) to pinpoint those characteristics of training which are unnecessarily difficult and those which may be significantly demotivating.

II. METHOD

Types of Data. The data presented in this report are of two types: (1) factual information of a student pilot's elimination from UPT, and (2) student pilot self-perceived information. The factual information was obtained from the 82d Flying Training Wing, Williams Air Force Base, Arizona. It reports the cause of elimination, the number of training hours completed by the student, and the source of his commission.

The student's self-perceptions were obtained in an interview with the eliminated student. In this interview, the student reported his perceptions of personal and circumstantial factors associated with his elimination. A copy of the interview format is presented in Appendix A.

Sample. One-hundred-seventeen students, eliminated from the UPT program at Williams AFB, were interviewed by one or the other of the two authors during the period from 2 April 1973 to 29 April 1974. They were scheduled for an interview, as soon as possible, following conclusion of the official elimination process.

Procedures. Each eliminee was contacted and scheduled for an interview. The interviews were conducted in private and in an informal manner to put the eliminated student at ease. Each eliminee was given an explanation of the research value of his perceptions of the difficulties he experienced. He was assured that the contents of the interview would be kept strictly confidential and be used for research purposes only. It was requested that he be as candid as possible in presenting his views of factors related to his elimination. He was encouraged to talk spontaneously about his experiences in UPT. The interview format was followed to insure coverage of the desired information during the interview.

III. RESULTS AND DISCUSSION

In the presentation of the findings of the study, attention will be focused on the two types of information obtained from the students; the factual and the self-perceived. The first two tables deal primarily with the facts supplied by the 82d Flying Training Wing. Following presentation and discussion of this information, findings from the students' self-perceptions of factors involved in their elimination are presented. The results are presented in the same sequence as the questions asked during the interview. The interview information is categorized on the basis of the official causes of elimination. Where differences among categories are apparent, they are noted and discussed. Otherwise, interviewer interpretative comments have not been added to the subjective information obtained in the interview. This practice is intended to avoid going beyond the data and to eliminate unwarranted psychologizing on the information given. Primarily, the purpose of the discussion of the results is to provide a more adequate picture of the meaning of the facts given in the tables.

Table 1 presents the distribution of categories of elimination of the 117 student pilots eliminated from UPT at Williams AFB, Arizona, from 5 April 1973 to 29 April 1974. The distribution is categorized by fiscal year class number and by cause of elimination.

While practically all the attrition which occurred during the indicated time period is included in the statistics, only in classes 74-04 through 75-01 are the total number of eliminees in a class fully represented. This is because eliminees in the sample from classes prior to 74-04 occurred late in the UPT program and eliminees in the sample from classes after 75-01 represent those which occurred early in the UPT program. This fact is important in understanding pattern of attrition observed in the present study. Some trends which characterize attrition can be noticed in these early and late program classes. Eliminations for manifestation of apprehension (MOA) and self-initiated eliminations (SIE) tend to occur relatively early in UPT; elimination for flying deficiency (FD) usually occur later in UPT. These trends are suggested in Table 1 and are further emphasized by Table 2, which shows that the average number of flying hours accumulated in UPT by students eliminated for flying deficiency is much higher than for any other cause of elimination.

The remaining tables (3 through 12) present self-perception information obtained from the interview. It should be noted that often there are more entries in these tables in each elimination category than there are eliminees. This is because some eliminees made more than one response to a question. Since only one student was eliminated for academic failure, this category is not listed in the tables.

The reasons given for entering UPT (classified by category of elimination) are presented in Table 3. It can be seen that the desire to be a pilot is clearly the predominant reason for entering UPT. Other factors were of relatively minor importance and did not appear to differentiate between the categories of elimination except with SIE and MOA eliminees who frequently reported recruiter emphasis and unavailability of other kinds of assignments.

In Table 4, the problems cited by the eliminees which led to their elimination are shown according to the cause of elimination. This table indicates that there are different problems reported by SIE, MOA and FD eliminees. The self-initiated eliminees report a class of problems that might be characterized as the result of declining or negative affective/motivational reactions to their UPT experiences. The MOA eliminees reported some of the same problems as the SIE's but were specifically and distinctly different in their citing of fear of flying, airsickness and nervousness, sleeplessness and loss of appetite. FD eliminees more frequently reported problems with their flying performance such as with aircraft control and skills related to landing the aircraft.

Some FD eliminees noted airsickness as a problem in their elimination. With most such eliminees, the problem was not the fact of being airsick, but rather its negative impact on the student's ability to use his flying time effectively. He would fall behind with his flying training because

Table 1. Category of Elimination by Class at Williams Air Force Base, Arizona from 5 April 1973 to 29 April 1974

Cause of Elimination	Fiscal Year - Class Number														
	73-08	73-09	74-01	74-02	74-03	74-04	74-05	74-06	75-01	75-02	75-03	75-04	75-05	75-06	Total
SIE	0	0	0	0	1	4	16	13	9	3	1	1	0	1	49
MOA	0	0	0	0	2	3	8	6	5	1	1	1	0	0	27
FD	0	1	0	1	6	9	5	1	1	3	1	0	0	0	28
MED	1	0	0	1	1	1	0	1	3	1	2	1	0	0	12
ACAD	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
TOTAL	1	1	0	2	10	18	29	21	18	8	5	3	0	1	117

Table 2. Average Number of UPT Flying Hours Prior to Elimination

Cause of Elimination	N	Phase of Training T-41[a]	T-37	T-38	Total
SIE	49	1.0	28.2	2.0	31.2
MOA	27	1.4	12.8	0.0	14.2
FD	28	4.8	52.2	15.0	72.2
MD	12	2.0	23.2	9.9	35.1
ACAD	1	0.0	49.0	0.0	49.0

[a]T-41 training at Williams AFB was discontinued starting with Class 74-05.

Table 3. Frequency of Reasons for Entering UPT

Reasons for Entering UPT	Category of Elimination SIE	MOA	FD	MED
Desire to Fly	30	20	22	12
Recruiter Emphasized Flying Training	12	1	3	0
Preferred Another AF Job But Not Available	9	7	3	0
Air Force was Best Service Choice in Face of Being Drafted	4	0	0	0
Training to Prepare for Future Non-AF Career	3	0	0	0
Like Air Force Benefits	3	0	0	0
Could Not Get Suitable Civilian Job	2	0	0	1
Commitment to Serve Country	0	2	0	0

Note. Frequencies often exceed the number of students in a category since one student may give more than one reason for entering UPT.

Table 4. Perceived Problems Leading to Elimination

Perceived Problems Leading to Elimination	Category of Elimination			
	SIE	MOA	FC	MED
Lack or Loss of Motivation	33	5	1	
Didn't Like Flying or Being a Pilot	19	1		
Felt Degraded as Student	17	1		
Time on Flight Line Too Long	14			
Too Much Pressure	13	7	6	
Rewards Not Worth Effort	12			
Program Too Narrowing--Restrictive	12			
Negative Attitudes of Instructor Pilots	10		7	
Didn't Like Military Life	9			
Loss of Confidence	7	4	14	
Personal or Family Problems	7		4	
Decided on Another Career	7			
Commitment Too Long	5			
Physical Problems	3			
Frightened by Flying	3	7		
Draft Avoidance	3			
Frequent Airsickness		12	6	
Nervousness, Sleeplessness, Loss of Appetite		12		
Pre-Solo Landings		5	16	
Final Turn and Approach			13	
Precision in Aircraft Control			11	
Was Behind Aircraft			10	
Landing Pattern Work			10	
Instructor Pilot Change			6	
Discontinuity (Weather)			5	
Problems with Cross Check in Instrument Scanning			5	
Discontinuity (Illness)			4	
Poor Judgment			4	
Poor Check-Ride Performance			4	
Injuries				3
Visual Defects				3
Other Physical Defects				5
Mental Instability				1

of lost instruction and the discontinuities in his flying schedule due to being grounded following an actively airsick episode. Two other problems frequently reported by FD eliminees may also be seen as primarily related to flying performance problems, loss of confidence and negative IP attitudes. Loss of confidence can be interpreted as the inevitable result of nonsuccess. The negative attitude of the IP in part may be seen as the result of the student's relatively poor performance, and its effect might be an instance of the self-fulfilling prophecy in which the IP-student interactions go from critical to negative as the student continues to have flying performance problems.

The problem of too much pressure was cited relatively often by SIE, MOA, and FD eliminees. In the case of the SIE, too much pressure was reacted to negatively, contributing to the eliminee[s decision to discontinue flight training. The typical MOA reaction to the pressure was increased nervousness. The student having problems with his flying performance responded to the pressure by increasing his efforts to overcome the problems, thus creating more pressure and an increased likelihood that it would interfere with his already marginal performance level.

While these reactions to the pressure of the UPT program tended to be different, the pressure was real and, to a great extent, an intrinsic aspect of the program in which 210 hours of flight training and 263 hours of academic instruction are packaged into a period of approximately 48 to 52 weeks (Class 74-07 (75-01) took 58 weeks due to fuel crisis "stretchout"). Considering the fact that about 12 hours of every working day is scheduled for training activities, it is not surprising that UPT students experience varying degrees of pressure and that about 25% of the eliminees interviewed in the present study reported it as a factor leading to their elimination.

Student perceptions of their own flying training performances prior to their elimination are shown in Table 5. The highest frequency items are the "no problem or average performance" responses of SIE and MOA eliminees and the "not applicable responses" of all categories of elimination. There were more indications of no particular problems and, at the same time, more specific problems cited by the SIE's. There were about the same number of no problem and specific problem responses by MOA and FD eliminees. The data reported by the SIE's are very difficult to interpret unless it is related to the fact that the SIE, because he determines that he wishes to discontinue flying training rather than have the system determine that he cannot continue, is stimulated to find reasons for his elimination as a way of supporting his request. Whatever the basis for the difference between SIE responses and those of MOA, FD, and MD eliminees shown in Table 5, it suggests that SIE's are different from the other eliminees interviewed during the present study with respect to their perceptions of their own flying performances.

In Table 6, the sources of help sought by the eliminees in dealing with the problems that led to their elimination are shown in relation to category of elimination. The data of this table reflect primarily the different kinds of elimination.

Table 5. Student Perceptions of Their Own Weakness in Training Prior to Elimination

Specific Weakness (Self-Perceived)	Category of Elimination			
	SIE	MOA	FD	MED
None or Average (Satisfactory) Performance	32	12		
Landings (Pre and Post Solo)	10	3	7	1
Academics	4	2	5	
Instruments	2			
Problems While Ill	2			
Procedures	1			
Area Work	1			
Mid-Phase Check	1			1
General Weaknesses		3		
Cross-Check		1		
Pattern				
Aircraft Control			2	
Not Applicable or None Indicated	18	6	14	10

Table 6. Sources of Help Sought in Dealing with Problems Which Led to Elimination

Sources of Help Sought During Problems	Category of Elimination			
	SIE	MOA	FD	MED
Class commander	26	8	2	5
Peers	16	2	12	
Wife (or Family)	15			
Instructor Pilot	14	13	15	1
Student Section Leader	10			
Flight Commander	9	7	8	
Other IPs	5		9	
No One	4	3	1	
Chaplin	2			
Psychiatrist	2			
Flight Surgeon	1	17	2	12
Military Sources Outside UPT				2

The SIE tended to decide on his own to discontinue his flying training and then contact his IP, class commander, and flight commander to inform them of his decision. The MOA and MD eliminee, on the other hand, always contacted the flight surgeon who consulted with the student until a cause for elimination because of manifestations of apprehension or medical deficiency could be determined and validated. The FD eliminee also had a routine sequence of contacts typically beginning with his IP as serious flying problems developed, and continuing upward through the chain of supervision and command until the elimination was confirmed by action of a faculty board review of the facts of the case.

In this set of data, it is again clear that the SIE's were different from the other categories of eliminees in the high frequency of contacts with a wider variety of sources of help they reported. The kinds of comments SIE's made during the elimination interview suggested, but did not explicitly state, that the contacts with sources of help may have been made to convince the student that his decision to eliminate himself was not the wrong one. It should be noted that several MOA eliminees, particularly from class 74-05, reported comments indicating that they may have been seeking similar confirmation of their elimination circumstances; for example, that their airsickness was in fact a valid basis for their elimination.)

The eliminees' perceptions of their IP's effective teaching characteristics are shown in Table 7, broken down according to category of elimination. Inspection of Table 7 does not suggest any dramatic or provocative differences between the various categories of eliminations. The three most frequently mentioned effective teaching characteristics of IP's are cited as often by all four categories of eliminees.

In Table 8, students' perceptions of their IPs' ineffective teaching characteristics are presented according to category of elimination. Here again, the table does not suggest marked differences among the categories of eliminations except for the relatively high frequency report by FD eliminees that their IP was a poor or inexperienced teacher, destroyed their confidence, and did not praise them for their flying accomplishments. There are no indications that the IPs of the FD students were different from or less experienced than the IPs of students in other categories of attrition. The indications are that the FD eliminees remained in the program long enough to be influenced by whatever teaching weakness an IP might have.

The tendency of some FD eliminees to be critical of their IP's was limited to those students who tended to blame the UPT system for their failure, rather than acknowledging their own contribution in the chain of events leading to the FD elimination. Not all FD eliminees perceived their IP critically in this manner, but those who did tended to report similar experiences during training.

Student perceptions of their IP's ability to grade their progress and performance accurately are presented in Table 9 by category of elimination. While Table 9 does not reveal substantial differences based on the

Table 7. Perceptions of Instructor Pilot Effective Teaching Characteristics

Effective Characteristics	Category of Elimination SIE	MOA	FD	MED
Good Pilot	21	13	8	2
Personel Interest in Student	13	4	5	2
Fantastic IP--Good Guy	10	7	12	4
Excellent De-Briefs	8	1		2
Expected Quality Performance	8			
Treated Student With Respect	6			1
Enthusiasm for Job	5			
Good Pre-Briefs	5	1	1	
Calm, Relaxed	3	6	8	2
Praise for Things Done Well	2	2		1
No Screamer, Yeller	2	3		
Good Demonstrations--Good Teacher		8	3	
Experienced (Not a Recent UPT Graduate)			7	
Built Confidence			6	1
Let Student Make Mistakes			4	

Table 8. Perceptions of Instructor Pilot Ineffective Teaching Characteristics

Ineffective Characteristics	Category of Elimination SIE	MOA	FD	MED
Screamer or Yeller	8	4	7	
Demanded Too Much Precision	8	5		
Student-IP Relationship Too Formal	7	3	3	
Not Enough Time For Student	6	6	4	1
Lack of Enthusiasm-Interest	6	4	5	
Personality Conflict	4	3		
Degraded Student	4			
Poor or Inexperienced Teacher	4	2	11	
Stick Grabber	4		3	1
Sarcastic	3	2		
Talked Too Much During Flight	3	2	2	1
Too Protective	3	1		2
Poor Attitude	2	1	2	
Pre-Briefs	2			
Impatient		3	5	2
Destroyed Self-Confidence			7	
All Criticism--No Praise For Accomplishments			10	1

various types of elimination, the comments of FD eliminees who were critical of their IP and unwilling to accept responsibility for their failure clearly indicated that they did not think their IP could grade their flying performances accurately. In this regard, the FD eliminees were notably, if not vastly, different from the other types of eliminees.

Requests for change of IP are shown in Table 10 by category of elimination. Table 10 reveals that relatively few of the eliminees interviewed requested a change of IP. Those who requested a change of IP were predominantly FD eliminees who reported a personality conflict or believed they weren't learning as reasons for their request. This is another aspect of FD eliminee-IP difficulty noted previously in discussing the data of Tables 8 and 9.

The specific sources of irritation in UPT as perceived and reported by the 117 eliminees interviewed in this study are shown in Table 11 according to category of elimination. Inspection of Table 11 immediately reveals a long list of irritants and suggests relatively more responses by the eliminees than with other items in the interview. The 49 SIE's interviewed identified 104 irritants in 20 different categories. The 28 MOA eliminees reported 57 irritants in 13 different categories. The 27 FD eliminees interviewed reported 45 irritants in 12 categories. The 12 MD eliminees generated 14 complaints in 7 categories of irritants. It can be seen in Table 10 that the number and kinds of irritants reported by the eliminees interviewed are in approximate proportion to the number of different types of eliminees in the sample.

The most frequently occurring complaints appeared to be a function of: (1) Characteristics of the program which the eliminated student found undesirable; for example, wasted hours on the flight line; poor study environment on the flight line and the fast-paced (pressure producing) program; and (2) Characteristics of the program which departed from the eliminee's concept of how he would be treated as a person; for example, IP attitude, stand-up briefing harassment, and the generally degrading treatment the student pilots experienced.[1]

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[1]The perceptions of the eliminees reported in Table 11 are paralleled by the perceptions of UPT training managers and IP's who express these beliefs: (1) That the characteristics of UPT should challenge the student pilots because the challenges of UPT furnish minimum preparation for those a pilot will encounter after he graduates; and (2) That the way students are treated is an effective training technique designed to insure personal toughness and discipline in the face of a variety of obstacles since the tough, disciplined, obstacle defeating pilot is the only kind the Air Force is interested in having. These reactions are not often verbalized, but are frequently encountered in discussing the perceptions of eliminated students with UPT training managers and IP's.

Table 9. Perceptions of Instructor Pilot Capability to Grade Progress and Ability Accurately

IP Accuracy/Reason for Inaccuracy	Category of Elimination SIE	MOA	FD	MED
YES	28	18	15	3
NO	21	9	13	3
Lack of Standardization	8		3	1
Graded Limited by Syllabus	8	2	4	2
Too Lenient	4	4	3	1
Grades Used to Motivate	3			1
Too Hard	2	2	10	

Table 10. Requests for Instructor Pilot Change

Irritation Sources	Category of Elimination SIE	MOA	FD	MD
Reasons for Requesting INSTRUCTOR PILOT CHANGE				
Was Not Learning	1	2	8	0
Personality Conflict	1	2	6	0
Reasons for Not Requesting INSTRUCTOR PILOT CHANGE				
Felt It Would Prejudice Training	4	2	6	0
Had Changes Without Request	10	4	8	2
None Needed (IP--OK)	8	2	0	2
Not Applicable or Not Indicated	25	15	2	8

Table 11. Perceptions of Specific Irritants in UPT Program

Specific Irritants in UPT Training	Category of Elimination SIE	MOA	FD	MED
Wasted Hours on Flight Line	25	10	5	4
Students Degraded as Officers	11		12	3
Poor Attitude and Sarcasm of IPs	10	6	3	2
Flight Line Unsuitable for Study	9	6	4	
Stand-up Briefing	6	4	5	1
T-40 Program	6			
Program Moves Too Fast (Pressures)	4	9	3	
Physical Training Program	4	5	3	1
Delays in Receiving Relevant Publications	4			
Formal Dismissal from Flight Line	4	4	1	2
Unfair, Subjective, Overstandardized Grading	4		1	
Military Regulations and Restrictions, e.g., haircuts	3			
Bias Against Single Officers	3	2		
Memorization in Academics Testing	3	5		1
Program Geared to Students with Previous Flying Experience	2			
Competition Among Students	2			
Marginal Status	1			
Early Morning Report Time/Weekly Schedule Rotation	1	2	3	
Learning Center	1			
Poor Quality of BOQ Housing	1	1		
Punishment, Threat, Discipline Oriented Training		2		
Scheduling Discontinuities		1	4	
Flight Simulator Instructors			1	
BOQ Inspections			1	

Changes in UPT proposed by the eliminees interviewed are presented in Table 12 by category of elimination. As was the case with the sources of irritation in Table 11, there were a wide variety as well as a large number of different suggestions for improvement reported. The 49 SIE's made 106 suggestions in 20 different categories. The 27 MOA eliminees produced 25 suggestions in 12 categories. The 28 FD eliminees generated 40 proposed improvements in 13 categories. The 12 MED eliminees reported 10 suggestions in five categories. Generally, the number and kinds of proposed improvements were proportional to the number and category of eliminees interviewed, with the exception of the FD eliminees who reported relatively more proposed improvements than complaints.

It should be noted that the responses of many of the eliminees to the hypothetical proposition: "What would you change in UPT if you were general for a day?" elicited suggested changes that often were unrelated to the irritants reported by the individual eliminee. This observation indicates that the proposed changes were not an eliminee's attempt to assign responsibility for his elimination to UPT and to further emphasize this by recommending an appropriate change in the irritating portion of the program. The content of the suggested changes may thus be evaluated on their merits, with some confidence, that they represent the serious consideration of the eliminees rather than simply a form of psychological compensation.

IV. CONCLUSIONS

The objectives of the present study were to derive a better understanding of factors associated with UPT attrition at Williams AFB during the period from 4 April 1973 to 29 April 1974, and to delineate those areas of the UPT program which could benefit from training research.

With respect to the first objective, of achieving improved understanding of factors related to UPT attrition, the results suggest the following conclusions:

1. Inability to acquire pilot skills is not nearly as important a basis for a student pilot's elimination from UPT as are other categories of elimination, such as SIE and MOA, both of which are associated with a wide variety of psychological attributes.

2. A number of characteristics of UPT appear to have a marked effect on a student pilot's decision to eliminate himself from flying training (SIE) that are not perceived in the same way by student pilots in other categories of elimination.

3. Many eliminated students did not report that they perceived weaknesses in their own flying performance prior to their elimination, while those who did perceive weaknesses often reported problems with learning to land the aircraft.

Table 12. Proposed Changes in UPT if Eliminee Were "General for a Day"

Proposed Changes in UPT	Category of Elimination SIE	MOA	FD	MED
Lengthen Program	12			
Improve Treatment of Officer Student	11	3	3	
Give T-41 Training	10	1	2	
Eliminate Harassment-Inspections of BOQ	9		1	2
Reduce Long Flight Line Hours	8		2	2
Institute Self-Paced Program	6	2	7	
Make Flight Line Conducive to Study	6	4	3	
Reduce Pressure in Program	6			
Reduce Use of Formal Dismissal from Flight Line	6	3	2	2
Have Recruiters Give More Accurate Picture of UPT	5			
Foster Better Relationships between IP's and Students	5		6	
Improve Integration of Academics and Flying Program	4	2		
Improve IP Morale	3		3	2
Issue Publications As Soon As Possible	3	1		
Use Simulators More	3			
Improve BOQ Living Conditions	3			
Provide Alternative Entries into AF	2			
Use Experienced Pilots as IP's	2			
Require Physical Training on the Basis of Performance	1	4		
Educational Psychology Course for IP		1	2	
Improve Learning Center	1	1	4	
Decent Cafeterias		1	3	
Don't Train All Students for Fighters			2	
Better Screening		2		2

4. Eliminated students in all categories perceived the following effective teaching characteristics in their IP's: he was a good pilot, he took a personal interest in the student, was a "good guy," and was calm and relaxed.

5. The eliminees perceived, as ineffective, these IP teaching characteristics: he was a "screamer," he demanded too much precision, was too formal in his interactions with students, didn't have enough time for his students, and was unenthusiastic.

6. Wasted time on the flight line, degrading treatment of students and the IP's poor attitude toward the student were perceived frequently as specifically irritating characteristics of UPT by many students in all categories of elimination.

With respect to the second objective, of identifying areas which could benefit from training research, the results appear to warrant the following conclusions:

1. The Air Training Command IP and IP-student pilot interactions is an area which could benefit from further study.

2. The interview method used in this research effort is effective but uneconomical in terms of use of researcher time; therefore, less time-consuming methods should be developed for obtaining this kind of information from student pilots.

3. Because of the uncertain interpretation of much of the data reported here, similar information on the perceptions of student pilots who successfully complete UPT should be collected to serve as the basis for comparison with the perceptions of eliminated students to clarify their meaning more adequately.

4. Due to the limitations of resources available for accomplishing the present research, data were collected only at Williams AFB. To define the limits of the generalizability of the results obtained, the perceptions of UPT eliminees should be recorded at additional UPT bases.

V. RECOMMENDATIONS

1. In view of the apparent impact the student pilot's perceptions of how he is treated during UPT has on his decision to continue his flying training, it is recommended that study of student pilot perceptions be conducted on a continuing basis throughout Air Training Command and that the resulting information be furnished Flying Training Wing Commanders for their use in optimizing the effectiveness of the UPT program.

2. Because of the importance of the effect of the IP on the student pilot, it is recommended that research be initiated to identify ways to improve the effectiveness and quality of IP-student pilot interactions.

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Mission Analysis on Future Undergraduate Pilot Training: 1975 through 1990. AFSC-TR-72-001, Vols I, II, V, AD 900240, Mission Analysis Study Group, Randolph Air Force Base, Texas, 1972.

APPENDIX A: ELIMINATION INTERVIEW FORMAT

Obtain information for items 1-6 from elimination letter.

1. Name & Grade: 2. SSAN:

3. Date of Interview 4. Class:

5. Cause of Elimination: (Circle one)

   FD MOA SIE MED ACAD ADMIN

6. Phase Eliminated from:

   T-41; # hours_____. T-37; # hours_____. T-38; # hours_____.

Tell student that:

This interview is strictly confidential.

It in no way means your case is being reconsidered or re-evaluated.

7. Commission Source: OTS ROTC AFA OTHER (Specify)

8. Amount of prior time: _____hours (Not including T-41)

9. Prior service: _____(e.g., was student ever enlisted).

10. Are you married?

    Dependents:

    Do you have any older brothers or sisters?

11. What school did you graduate from?

    What was your major field of study?

    Did you consider trying to get a job in the Air Force which made use of your education?

    What happened?

    Do you have extensive experience in operating complex machinery? For example, farm equipment, construction equipment.

Do you have extensive experience in athletic competition? If so, what sport(s) and what kind of experience?

12. Do you think you could briefly summarize the events which led to your elimination?

Were you weak in a previous phase on anything?

13. Whom in particular did you go to for help when you knew you had a problem?

How did they react?

Was your wife/family worried about your flying?

On the whole, was there anything unusual about the process by which you were eliminated?

14. Tell me about the good and bad points of your instructors. What was his technique in flight? Were his pre- and de- briefs thorough?

	GOOD	BAD
T-41		
T-37		
T-38		

How would you rate your IPs on their ability to grade your progress? Did their grades accurately reflect your ability?

	GOOD	BAD
T-41		
T-37		
T-38		

Did you ever request an IP change? If so, why? If not and you were in trouble, why not?

T-41

T-37

T-38

15. What aspects of the training/academic program would you specifically identify as irritable?

If you were "General for a day," in what way would you change (add to or detract from) the training or academic program?

16. Did you know what UPT was going to be like?

If so, how did it compare to your prior expectations?

How would you prepare for UPT if you could do it once again?

17. Additional Comments: (For example, what is student's next assignment?)

Credibility Rating: Did the student appear to be honest or did he appear to be holding something back?

Could you have predicted that this student was going to be eliminated? How early?

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